

Rock Creek Bridge
Spanning Rock Creek on County Road,
at the south end of Main Street
Joliet
Carbon County
Montana

HAER No. MT-56

HAER
MONT,
5-JOLI,
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
Rocky Mountain Regional Office
National Park Service
U.S. Department of the Interior
P.O. Box 25287
Denver, Colorado 80225

HISTORIC AMERICAN ENGINEERING RECORD

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5-JOLI,
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Rock Creek Bridge

HAER No. MT-56

Location: Located in Section 14, Township 4 South, Range 22 East
The bridge, on County Road, carries the south end of Main Street over Rock Creek in Joliet, Carbon County, Montana

UTM: Zone 12 E-658880 - N-5027200
Quad: Fromberg

Date of Construction: 1901

Builder: William S. Hewett and Company
Minneapolis, Minnesota

Present Owner: Carbon County Courthouse
Carbon County, Montana

Present Use: Vehicular bridge for a gravel county road

Significance: The Rock Creek Bridge is listed in the National Register of Historic Places as part of the Joliet, Montana, Multiple Resource Nomination. The bridge was Carbon County's first steel truss and its location contributed to the economic growth of Joliet by providing access to the community from agricultural areas on the south side of the river during the town's initial stage of development. The bridge is also associated with William S. Hewett, one of the most prominent Minneapolis bridge builders in Montana.

Historian: Edrie Vinson
Montana Department of Highways
Helena, Montana

January 1989

I. HISTORY

A. History of the Joliet Area

The Joliet Bridge crosses Rock Creek just south of Joliet, Montana, on a county road that leads through a rural agricultural area. Rock Creek is one of two main drainages in Carbon County. Its waters originate in the Beartooth Mountains and flow north-northeast to join the Clark's Fork of the Yellowstone River.

Until 1892, the land where Joliet is situated was part of the Crow Indian Reservation. The first major threat of white encroachment came when the Rocky Fork and Cooke City Railroad (part of the Northern Pacific system) was granted a right-of-way to pass from Laurel south through the reservation to Red Lodge and beyond, over the Beartooth Mountains to Cooke City. While the railroad never made it beyond Red Lodge, in 1889 it established a siding and station where the town of Joliet eventually sprang into being.¹

Carbon County was formed out of Park County in 1896, and after that date, the local citizens were continuously requesting road and bridge work. Prior to the 1901 construction of the steel truss Rock Creek Bridge at Joliet, there had been eight requests for bridges across the creek. Six were granted. All were likely wood pile bridges. One of the early settlers of Joliet Township and the most important promoter of the town of Joliet was Harry Duffield. He was a county commissioner at the turn of the 20th century. Perhaps due to Duffield's influence, the bridge at Joliet would become the first steel span erected in the county.²

B. Construction of the Rock Creek Bridge

In a special session in January 1901, the Carbon County Commissioners opened bids from six bridge-building companies for construction of the Rock Creek Bridge at Joliet. The commissioners awarded the contract to William S. Hewett, the lowest bidder at \$4,500. The company was to supply its own plans and specifications to the satisfaction of the commissioners. Much to the chagrin of the commissioners, the span they ordered was not long enough to span Rock Creek and bids for an "extension" were sought. William S. Hewett submitted the only bid at \$750. He was to furnish all plans and materials for a 30-foot combination span, and build another pier. The "extension" no longer exists, but historic records show that it was a steel pony truss. By August, the Carbon County Sentinel wrote that the "new iron bridge at Joliet is

¹ Joan Brownell, "Historic Resources of Joliet, Montana," multiple resource nomination to the National Register of Historic Places, October 1985, on file at the State Historic Preservation Office, Montana Historical Society, Helena.

² Earlier petitions for bridges across Rock Creek and record of Duffield's tenure as county commissioner may be found in the Carbon County "Commissioners Record," Carbon County Courthouse, Red Lodge.

beginning to look substantial and, when completed, it will be one of the best bridges in the county.³

The Board of County Commissioners must have agreed that it was one of their best bridges and they obviously took care of it. In September 1914, they had the Security Bridge Company (Hewett's new company) repaint it at a cost of \$140. The bridge was repainted again in 1925 and 1929.⁴

Information on when the pony truss extension was removed is not available. Montana Bridge Bureau records indicate the bridge was repaired in 1929, but that may be the date of the last painting rather than that of the repair. There were serious floods on Rock Creek in 1943, 1952, and 1957, the latter being the highest on record, at about 250% of normal. If the original pony truss went out in any of these floods, the existing timber stringer approach spans were likely to have been constructed by county crews/

C. William S. Hewett and Company

The William S. Hewett and Company was one of the most prolific bridge builders in Montana during the turn of the 20th century, especially in central and eastern Montana. The Montana Historic Bridge Inventory identified eight bridges built by Hewett's company. William S. Hewett, the founder and namesake of the company, began his career in the Minneapolis-based bridge-building company of his uncle, S. M. Hewett, in 1887. Ten years later, he formed the William S. Hewett Bridge Company in Minneapolis. This company built numerous bridges in Minnesota, the Dakotas, and Montana.⁵

In addition to building truss bridges, Hewett experimented with concrete structures. He participated in an early reinforced concrete bridge construction project in Iowa in the 1890s and later patented a pre-case concrete culvert called the Security Culvert. Hewett was also important in the development of prestressed concrete technology, developing a means for pre-stressing municipal water tanks, so they would not leak when the concrete cured. In 1906, Hewett and his cousin, Arthur L. Hewett, formed the Security Bridge Company in Minneapolis.⁶

³ Carbon County "Commissioner's Record," minutes of special sessions held in January and June of 1901; Inventory form for the Joliet Bridge in Brownell, "Historic Resources of Joliet."

⁴ Record of subsequent repairs to the bridge may be found in the Carbon County "Commissioners Record."

⁵ Frederic L. Quivik, Historic Bridges in Montana (Washington, D.C.: Historic American Engineering Record, 1982), 40-43.

⁶ Fred Quivik, "Montana's Minneapolis Bridge Builders," IA: Journal of the Society for Industrial Archeology 10 (1984): 45.

Arthur Hewett also began his career with S. M. Hewett and began traveling to Montana in 1892 to represent the company and to supervise bridge construction. In 1898, Arthur went to work for his cousin as a travelling agent, and in 1904, he opened a Billings office for the William S. Hewett Company. Two years later, the two cousins formed the Security Bridge Company. Both men continued to live in Minneapolis until 1910, when Arthur moved to Billings. The following year, the Security Bridge Company moved its headquarters to Billings, filing articles of incorporation with the State of Montana. While continuing his financial interest in the Security Bridge Company, William Hewett turned his intellectual interest elsewhere, focusing on his water tank system and other engineering projects. The Security Bridge Company ceased business in 1926.⁷

II. DESCRIPTION OF THE ROCK CREEK BRIDGE

The main span of the Rock Creek Bridge is a 103' 3", pin-connected Pratt through truss. It has six panels measuring 17 feet 2-1/2 inches each. The main span rests on a concrete abutment and tubular piers. The wood stringer approach span rests on a concrete abutment.

The inclined end posts and the upper chords are composed to two 7" channel sections riveted with a continuous steel cover plate along the upper flanges and with 1-1/2-inch wide lacing bars riveted along the lower flanges. The hip verticals are composed of two pairs of 2-1/2-inch angle sections riveted together with batten plates. The remaining verticals consist of two channel sections riveted with lacing bars. The diagonals are each a pair of forged steel eye-bars. The counters at the two center panels are square rods. The lower chords are comprised of a pair of 2-inch punched eye-bars. The 15-inch steel I-beam floor beams are riveted to the verticals below the lower chords. The wood stringers rest atop the floor beams and support a wood plank deck.

Sway bracing is provided by two pairs of angle sections riveted with lacing bars. The portal bracing is built up of two pairs of angle sections in a lattice pattern between pairs of angle sections. Top lateral bracing is 3/4-inch rods. The original guardrail has been replaced with a contemporary highway guardrail. The broken bridge plaque on the end post reads: "1901, Wm. S. Hewett & Co., Builders, Minneapolis, Minn."

III. FUTURE OF THE BRIDGE

The Rock Creek Bridge is owned by Carbon County, Montana. The Montana Department of Highways and Carbon County are planning to realign the gravel road connecting the two sides of Rock Creek. These plans call for the replacement of the Rock Creek Bridge. In accordance with Section 106 of the National Historic Preservation Act of 1966, the Federal Highway Administration and the Montana Department of Highways have executed a Memorandum of Agreement with the Montana Historical Society and the Advisory Council on Historic Preservation, under which this Historic American Engineering Record documentation has been prepared. The bridge was offered for relocation.

⁷ Ibid.

NOTE: Since the bridge was recorded, it has been relocated and is now sitting on the grounds of a private business near Joliet.

IV. BIBLIOGRAPHY

A. Books

Quivik, Frederic L. Historic Bridges in Montana. Washington, D.C.: National Park Service, 1982.

B. Articles and Papers

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Quivik, Frederic L. "Montana's Minneapolis Bridge Builders." IA: The Journal of the Society for Industrial Archeology 10 (1984): 41-46.

C. Government Sources

Carbon County "Commissioners Record." Carbon County Courthouse, Red Lodge, Montana. 1892-1914.